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FISHERY RESEARCH

FISHERY RESEARCH SUPERVISION AND SUPPORT ANNUAL PERFORMANCE REPORT 1994-1995

By:

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ANNUAL PERFORMANCE REPORT

State of: Idaho

Grant: F-73-R-17, Fishery Research

Project No.: 1

Title: Fishery Research Supervision

Period Covered: April 1, 1994 to March 31, 1995

Objectives

1. To annually provide administrative and technical support, direct field operations and planning for each of IDFG fishery research projects (15) to produce:

   a) a work plan
   b) a project statement
   c) a report, and
   d) a project review

2. To provide technical training and continuing education for IDFG's fishery staff (45) in procedures, technical writing, and statistical design on analysis.

3. To provide technical edits, peer review, and publications of 41 to 50 fishery activities and findings of IDFG for permanent record.

4. To maintain the IDFG report resource reference area and a computerized report data base.

5. To provide office space and equipment storage for field staff at the Nampa Fisheries Research Center.

Administration and Planning

Direct supervision was provided to three Principal Fishery Research Biologists, two Fishery Staff Biologists, and one Senior Fishery Research Biologist. Indirect supervision was provided to twelve Fishery Research Biologists and six Senior Fishery Technicians. Sport Fish Restoration, Bonneville Power, and Lower Snake River Compensation Plan grants and contracts to support nineteen Department and three University conducted research projects were prepared and submitted. Individual study review, work plan, and study design meetings were conducted for various projects.

A section meeting was held in December 1994. The following mission statement for the research section was developed:

"To develop and effectively communicate sound scientific information to enhance the management of /daho's fishery resources."

A meeting was held in February, 1995 to identify and prioritize "discretionary" (Sport Fish Restoration) research needs. Representatives from each management region, Fisheries Bureau management staff, the Bureau Chief, hatchery staff, and research staff participated. The results of that meeting, which are summarized in Attachment A, were incorporated into research activity plans for the remainder of the grant period and submitted to the Bureau Chief and Assistant Director for review and approval.

Training

In conjunction with the annual research meeting, a one-day stress management course was provided to all fisheries personnel.

Publications

Eighteen annual reports and two research briefs were reviewed, edited, prepared by word processing specialists for printing, and submitted to funding sources.

Resource Reference Area

The report reference area was further organized and the dBASE fisheries catalog system was transferred to ASCII and incorporated into Pro-Cite. Individual sessions with all Bureau staff were held to provide familiarity with Pro-Cite.

Nampa Facility

Approval was obtained for Bonneville Power Administration funding of a storage shed, and a site and project review held with station and Department engineering staff.

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Appendix A.

To provide direction for the Department's "discretionary" fisheries research program, a combination of management, hatchery and research personnel identified and prioritized needed information and tools that would enhance fisheries management in Idaho. With the current staff level committed to discretionary research, the top fifteen items identified could be addressed during the 1996-2000 planning period. Those research activities and the planned schedule for addressing each are shown below.

PRIORITY*	MANAGEMENT NEEDS TO BE ADDRESSED BY DISCRETIONARY RESEARCH	SCHEDULE
1(4)	A standardized common fisheries data base for streams, lowland and alpine lakes.	1995-96
2(13)	A matrix for designing creel censuses which yield estimates of given precision and reliability.	1995
3(1)	Population effects of whirling disease in Idaho.	1995-98
4(3)	Tradeoffs in economics and angler satisfaction from stocking lowland lakes with hatchery trout at various sizes, times, frequencies, densities and condition.	1995-99
5(10)	Population effects of electrofishing injury.	1995-97
6(11)	Relative numbers, characteristics, and ultimate fate of anglers displaced by various regulation changes.	1995-97
7(8)	Improved methods for determining angler opinions and preferences. 19(12) A method for quantifying angler satisfaction. 24(20) Can adjusting expectations improve angler satisfaction. 25(16) Do social norms or expectations bias angler's responses on opinion surveys.	1995-99 1998-99 1997-99 1996-98
8(-)	A matrix for designing trout stream sampling programs which will yield estimates of given precision and reliability which are representative enough for various sampling objectives.	1998-99
9(6)	A synopsis of alpine lake management.	1995
10(9)	Sterile hatchery trout which can be produced economically and consistently on a production level that will avoid genetic risk to wild trout and/or perform better.	1995-99
1 1 (-)	The response of bull trout populations to the 1994 harvest closure.	1995-99

12(7)	Relationships between physical and chemical characteristics of takes and reservoirs and the quality of fisheries.	1995-97
13(5)	The mechanisms and magnitude of fish losses from reservoirs, whether losses hinder the attainment of fisheries goals, and if so, how to minimize or mitigate losses.	1997-99
14(14)	Life history characteristics of Idaho hatchery rainbow brood stocks which might influence the ultimate size and contribution to the fishery.	1997-99
15(2)	The fishery impact of stream trout losses to irrigation diversions/if significant, means of minimizing or mitigating.	1995-99
+	Methods for increasing catchability of hatchery trout.	1995-99
+	The ability of special regulations which do not prohibit bait to meet management objectives.	1995-99
+	Finalize and communicate "random response" method for measuring regulation non-compliance.	1996

* Projects prioritized by two methods: ranking based on a combination of a) potential benefit to fishery, b) likelihood of success, and c) cost; and ranking (in parenthesis) of general importance with no specific criteria.

+ Projects which are ongoing or were not rated, but complement planned research.

Additional items identified which were either of lower priority, unranked, or being addressed elsewhere in the fisheries community included:

1. Affects of population isolation on indigenous species such as redband and bull trout.
2. Impacts of changes in Idaho fish distribution and abundance on angling opportunity and economics.
3. Impact of changes in water yield due to timber harvest on wild trout populations.
4. Levels of genetic introgression that compromise wild trout stocks.
5. A predictive model for riverine water temperatures.
6. Limiting factors on bass reproduction in Idaho and mitigation options,
7. Status of adfluvial bull trout.

ANNUAL PROGRESS REPORT

State of: Idaho

Grant No.: F-73-R-17, Fishery Research

Project No.: 2

Title: Statewide Fisheries Statistical Assistance, Angler Opinions, and Harvest Surveys

Period Covered: April 1, 1994 to March 31, 1995

Objectives

1. To provide estimates of harvest and effort for the following species: steelhead, sturgeon, and bull trout.

2. To provide IDFG personnel with training and support in angler survey design, implementation, and analysis.

Results

Harvest Estimates

The following harvest surveys were completed with results distributed to management and reported in separate management documents:

a. 1993 fall steelhead season harvest survey
b. 1993 fall season bull trout harvest survey
c. 1993 sturgeon catch and effort survey
d. 1994 spring steelhead season harvest survey

Survey Training and Support

The following survey-related training and support was provided to research and management personnel:

a. Pulled samples, distributed, entered data, and compiled results for wild trout mail survey.
b. Pulled samples, distributed, entered data, and compiled results for statewide angler opinion survey.
c. SYSTAT training organized and attended
d. Creel system support updates and instruction
e. Priest Lake creel survey set-up and data entry of historical creel data

f. Hayden Lake creel census and mail survey data entry design and analysis
g. Analysis of St. Joe River creel data with data entry
h. Performed analysis of sturgeon tag and angler diary data
i. Performed analysis of "How would you like to see the $15 license fee spent?" survey for management.
j. Henrys Fork and Island Park postcard survey with retrieval of plate numbers using SAS on DOT database
k. Supervision of Boise River volunteer creel data entry.

Other Support

a. Performed statistical analysis and designed programs for data transformation in hooking mortality studies
b. Provided programming support for hatchery evaluation database.
c. Performed catchable trout return regression analysis.
d. Continued development of budget and project management database in meeting of objectives and allocation of resources.
e. Assisted with hydroacoustic survey data importation and analysis techniques.
f. Consulted on statistical analysis and programs for data transformation in hooking mortality study.

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IDAHO DEPARTMENT OF FISH AND GAME

Steven M. Huffaker, Chief
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Funds Expended:

State:	$55,540
Federal:	$166,622
Total:	$222,162

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